

Weekly Report

2018.01.08-2018.01.14

1.This Week

Summarization Form

Task	Progress	Time
Power Grid New Projects	Decide the details of the system.	February
Power Grid Visualization Survey	Gathering materials.	
VIS 2018 paper	Idea evaluation and make plans.	4.1

Power Flow Project in Ningbo

1.Discuss with students in Ningbo about details of the system, including:

- check the possibility to aggregate the buses into regions. If not, then use k-means and DTW as the distance function to cluster the nodes.
- decide the layout of the topology view and interactions on it
- design the parallel bar chart and decide the different granularities of it
- decide the sorting of the parallel bar chart

2.The current progress:

- the front-end demo is partly finished with fake data (because the back-end is still writing the data port)
- the back-end group is constructing the database and providing data ports for the front end group
- the front-end interface need to be re-designed

Idea evaluation for VIS 2018

1.task characterization:

- classification of simulation samples
- identify outliers in classes
- identify combined patterns in different classes
- summarize overall behaviors of different classes

- compare different classes

2.The current idea is:

- use raw time series to run deep learning classification methods (LSTM)
- run LSTM on simulations samples to do the classification
- visual analytics part: class summarization, projection of all classes, image packing of image analysis

Others

- 1.Gather materials on machine aided power grid analysis of Prof. He Haibo and Yu Tao. Write the report.
- 2.Organize the foundation material.
- 3.Review the Eurovis paper.

Papers (from deep learning session from vast)

1.VIGOR: Interactive Visual Exploration of Graph Query Results

2.Visual Analysis of Place Connectedness by Public Transport

2.TODO

1. other projects of power grid started.
2. VIS 2018 paper idea evaluation.